

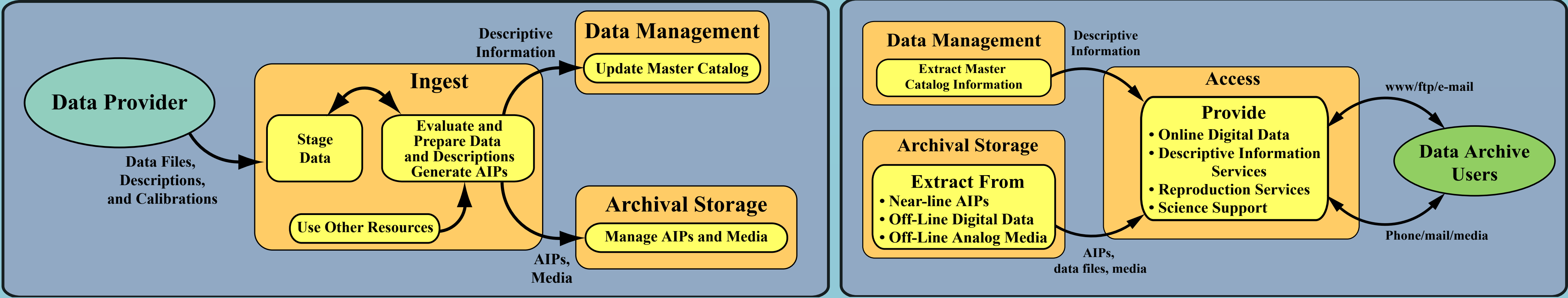
“Show Me The Data” What Real Users Want from a Data Archive

Nathan James - NASA Goddard Space Flight Center April 2007

Abstract:

The National Space Science Data Center (NSSDC) serves as the permanent archive for NASA's Office of Space Science (OSS). A major component of its mission is to ensure future data accessibility and usability. NSSDC also provides current data access, complementary to the efforts of other NASA/OSS "active archives," in support of the NASA and international astrophysics and space physics research enterprises. The presenter seeks to highlight the results gathered from interviewing science users of these archives concerning their access requirements. (See results at <http://nssdc.gsfc.nasa.gov/misc/ShowMeResults.pdf>). The intent of this poster presentation is to generate discussion around the following:

- 1) The top 3 things that users say they need when retrieving archived data;
- 2) The common barriers to users getting to the data they want;
- 3) Tools/techniques that have proven to be most helpful in finding/accessing/retrieving archived data; and
- 4) New technologies being developed with proven user-friendly tools/techniques in mind



Total data products sent out monthly from NSSDC

	ITEMS				Discipline				Totals
	DISCs	PRINTED	ANALOG	FTP	Astrophysics	Planetary	Space Physics	Other	
Jan-06	40	35	4	499	524	52	2	0	578
Feb-06	18	12	2	45	4	72	1	0	77
Mar-06	92	95	1	1478	6	1631	29	0	1666
Apr-06	105	49	0	1316	525	653	292	0	1470
May-06	42	237	3	5	18	65	200	4	287
Jun-06	337	6	3	2	0	346	2	0	348
Jul-06	117	43	1	204	4	156	205	0	365
Aug-06	24	14	12	50	5	91	3	1	100
Sep-06	50	12	59	3204	3263	62	0	0	3325
Oct-06	23	13	1	7317	7	42	7304	1	7354
Nov-06	5	5	136	34	33	41	2	104	180
Dec-06	19	13	0	164	6	190	0	0	196
Totals'06	872	534	222	14318	4395	3401	8040	110	15946
Totals'05	700	531	265	2585	1237	1928	660	256	4081

Counts of NSSDC Datasets on December 31, 2006

Discipline	Digital	Non-Digital	Total
Astronomy	226	77	303
Space/Solar Phys	1245	666	1911
Planetary	669	761	1430
Earth	123	131	254
Other (incl Ephem)	99	438	537
Total	2362	2073	4435

Number of Files Downloaded via FTP

	2002	2003	2004	2005	2006
Photo Gallery	1,516,658	1,633,333	1,277,133	1,190,555	936,039
Spacecraft Data	746,008	572,791	468,580	1,154,900	802,438
Geophysical Models	95,957	110,191	92,063	96,901	116,081
All others on nssdcftp	179,277	438,834	721,474	1,166,818	882,307
Total	2,537,900	2,755,149	2,559,250	3,609,174	2,736,865

Space Physics Data FTP Accessible from NSSDC on December 31, 2006

SPACECRAFT	ftp://nssdcftp/spacecraft_data GB
ACE	16.17
CRRES	34.06
DE	186.64
HELIOS	1.16
IMAGE	260.99
IMP	34.40
ISEE	17.08
ISIS	170.48
MAGSAT	1.87
OMNI	14.57
PIONEER	2.00
RHESSI	1.98
SAMPEX	57.39
ULYSSES	228.52
VOYAGER	28.27
WIND	23.80
Others*	4.33
TOTAL	1083.72

* Others total includes spacecraft with <1Gb data each, including AE-C,-D,-E, AEROS, Alouette, ARCAD, Explorers 22 & 31, Galileo, Genesis, Hinotori, Mariner 10, OGO, Prognoz 6,7, & 9, San Marco, SNOE, and additional Soviet spacecraft; SWAS not included as per 2005 MOU with LAMBDA.

2006 Access Statistics to Geophysical Models & Services

GEOPHYSICAL MODELS	Accesses*
Corrected Geomagnetic Coordinates, and Related Parameters	15,560
International Reference Ionosphere Model (IRI)	63,069
MSIS Atmospheric Model	54,610
International Geomagnetic Reference Field Model (IGRF)	7,008
User-Oriented Service Based on External (T_89,T_96) and Internal (IGRF)	2,450
Geomagnetic Field Models	
Trapped Particles Model	3,424
Total, Geophysical Models and Ephemerides	146,121

* These counts are software executions, yielding results for user-specified criteria. They do not include ftp-downloads of corresponding software.